REMARKS

Status of Claims

Claims 1 through 13, in their form as submitted in Applicants' reply of December 30, 2005, are pending before the Examiner.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 2, 3, 5 and 9-13; Ito et al. '763

Claims 1, 2, 3, 5, and 9-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,465,763 to Ito et al.

A ceramic susceptor substrate as recited in independent claims 1 and 9 is characterized by an outer-span range of within 0.8% of the average diameter.

These claims have been rejected over the edge ("side face") surface roughness of the Ito et al. susceptor. In particular, since Ito et al. discloses a roughness R_{max} of not greater than 200 μm, for a 300-mm susceptor, the Office asserts that the maximum diameter of an Ito et al. susceptor in that case would be 300.2 mm, which allegedly would meet Applicants' claimed outer-span range.

Susceptor substrate-edge surface roughness fundamentally differs from outer-span range (difference between substrate maximum and minimum outer diameters). That is, substrate-edge surface roughness is a parameter merely indicating the surface at the outer span; if the edge surface is polished, then by definition R_{max} will be on the order of 5 μm, ***regardless of the range over which the outer-span varies***.

For example, supposing the outer span is 300 mm, then the edge surface roughness being R_{max} = 5 μm does ***not*** mean that the range over which the outer-span varies will be 5 μm. The outer-span measurement itself and the surface roughness along the outer span are different things altogether. Put differently, even supposing the susceptor substrate could be in the form of an ellipse with a major axis of, say, 350 mm and a minor axis of 250 mm, that substrate could still have an edge surface roughness R_{max} of 5 μm—regardless of the 100-mm difference between maximum and minimum outer diameters.

A further counterexample is that even with the substrate surface in a mirrorlike state, such that the surface roughness $Ra \leq 0.1$ μm, presuming the susceptor is elliptical, then the difference between the maximum and minimum spans, as intended according to claims 1 and 9, would be difference between the lengths of the major and minor axes—irrespective of the surface roughness.